



Halgerda terramtuentis
Courtesy Keoki Stender

Marine Invertebrates

Nudibranchs and other Opisthobranchs

SPECIES STATUS:

IUCN Red List - Not considered
Endemic

SPECIES INFORMATION: Species with common names are: Scott Johnson's nudibranch (*Ardeadoris scottjohnsoni*), snow goddess nudibranch (*Glossodoris poliahu*), gold lace nudibranch (*Halgerda terramtuentis*), Anderson's nudibranch (*Hypselodoris andersoni*), Fellow's nudibranch (*Peltodoris fellowsi*), Blue head-shield slug (*Philineopsis speciosa*), and pali nudibranch (*Halgerda paliensis*). A complete list of Hawai'i opisthobranchs of greatest conservation need is at the end of this fact sheet. The first ten species are cephalaspids (headshield slugs and bubble shells) which are ancestral opisthobranchs. The next seven species are *Pleurobranchus* (a side gilled slug or notospidean) and six sap-sucking slugs (sacoglossans). The sacoglossans are mostly herbivores. Many can retain intact chloroplasts in their tissue which then provide the animal photosynthesized nutrients. The remainder of the species are nudibranchs. All nudibranchs are carnivores and feed on a variety of organisms ranging from sponges, hydroids, and corals to other nudibranchs. All nudibranchs are hermaphroditic and mate through mutual insemination. Eggs are laid in coiled ribbons. Eggs hatch and trochophore larvae develop into planktonic veligers that lose their shell once they settle. Most nudibranchs do not live longer than one year. It is interesting to note that nudibranchs have few natural predators. They are usually toxic, although they do not produce their own toxins, but recycle those of their prey.

DISTRIBUTION: Most species are found throughout the Hawaiian Archipelago; however, the gold lace nudibranch is only found in the Main Hawaiian Islands.

ABUNDANCE: Snow goddess nudibranch is uncommon. There is little quantitative abundance or trend data for any of the species.

LOCATION AND CONDITION OF KEY HABITAT: Gold lace nudibranchs are found around caves in waters from approximately five to 30 meters (15 to 100 feet). Anderson's nudibranch's primary habitat is in caves as well as under overhangs on exposed rocky shores from five to 18 meters (15 to 60 feet). Anderson's nudibranchs also live on the yellow sponge *Luffariella metachromia*. Additionally, they occasionally have been found in shallower waters of harbors and boat channels. Fellow's nudibranch is found at the entrance of caves from six to fifteen meters (20 to 50 feet) or more and live on sponges. The blue headshield slug lives under

or on the sand. The pali nudibranch's primary habitat is waters from two to six meters (six to 20 feet) deep. Specific habitat for the other species has not been delineated. *Atys* and *Scaphander* are deep water species. Many of the other species habitat needs are largely unknown.

THREATS:

- The aquarium trade targets gold lace, Fellow's, pali and other nudibranchs.

CONSERVATION ACTIONS: In addition to common statewide and marine conservation actions, specific actions include:

- Maintain healthy populations with appropriate aquarium fishing regulations, enforcement, and education.

MONITORING:

- Survey for populations and distribution in known and likely habitats.

RESEARCH PRIORITIES:

- Improve understanding of factors affecting the species population sizes and distributions.

References:

- Gulko D. 2004. Hawaiian marine species for ESA Candidate listing revised Candidate list. Honolulu, HI: Division of Aquatic Resources, State of Hawai'i.
- Hoover JP. 1998. Hawaii's sea creatures, A guide to Hawaii's marine invertebrates. Honolulu, HI: Mutual Publishing. 366 pp.
- Kay AE. 1979. Hawaiian marine shells reef and shore fauna of Hawaii, section 4: Mollusca. Honolulu, HI: Bishop Museum Press. 653 pp.

Opisthobranch SGCNs

Family	Scientific Name	Hawaiian name	Common Name
Hamineidae	<i>Atys costulosa</i>	None	None
Hamineidae	<i>Atys debilis</i>	None	None
Hamineidae	<i>Atys kuhnsi</i>	None	None
Aglajidae	<i>Aglaja nuttalli</i>	None	None
Aglajidae	<i>Philinopsis speciosa</i>	None	Blue headshield slug
Scaphandridae	<i>Acteocina hawaiiensis</i>	None	None
Scaphandridae	<i>Cylichna pusilla</i>	None	None
Scaphandridae	<i>Nipponoscapander takedai</i>	None	None
Scaphandridae	<i>Scaphander alatus</i>	None	None
Scaphandridae	<i>Scaphander pustulosus</i>	None	None
Pleurobranchidae	<i>Pleurobranchus violaceus</i>	None	None
Oxynoeidae	<i>Lophocercus krohnii</i>	None	None
Volvatellidae	<i>Volvatella fragilis</i>	None	None

Family	Scientific Name	Hawaiian name	Common Name
Juliidae	<i>Berthelinia pseudochloris</i>	None	None
Caliphyllidae	<i>Branchophyllum pellucida</i>	None	None
Plakobranchidae	<i>Elysia degenera</i>	None	None
Plakobranchidae	<i>Elysia nealae</i>	None	None
Chromodorididae	<i>Glossodoris poliahu</i>	None	Snow-goddess nudibranch
Chromodorididae	<i>Hypselodoris alboterminata</i>	None	None
Chromodorididae	<i>Hypselodoris bertschi</i>	None	None
Chromodorididae	<i>Hypselodoris insulana</i>	None	None
Chromodorididae	<i>Hypselodoris paulinae</i>	None	Pauline's nudibranch
Chromodorididae	<i>Hypselodoris peasei</i>	None	Anderson's nudibranch
Chromodorididae	<i>Hypselodoris violabanchia</i>	None	None
Chromodorididae	<i>Thorunna kahuna</i>	None	None
Dorididae	<i>Archidoris hawaiiensis</i>	None	None
			Scott Johnson's nudibranch
Dorididae	<i>Ardeadoris scottjohnsoni</i>	None	None
Dorididae	<i>Doriobis nucleola</i>	None	None
Dorididae	<i>Halgerda terramtuentis</i>	None	Gold lace nudibranch
Dorididae	<i>Jorunna alisonae</i>	None	None
Dorididae	<i>Peltodoris fellowsi</i>	None	Fellow's nudibranch
Dorididae	<i>Halgerda paliensis</i>	None	Pali nudibranch
Dorididae	<i>Sclerodoris sp. "1"</i>	None	None
Dorididae	<i>Sclerodoris sp. "2"</i>	None	None
Dorididae	<i>Thordisa setosa</i>	None	None
Dorididae	<i>Trippa echinata</i>	None	None
Dorididae	<i>Trippa scabriuscula</i>	None	None
Hexabranchidae	<i>Hexabranchus aureomarginatus</i>	None	None
Hexabranchidae	<i>Hexabranchus pulchellus</i>	None	None
Arminidae	<i>Dermatobranchus rubida</i>	None	None
Tritoniidae	<i>Tritonia hawaiiensis</i>	None	None